

**ABSTRACT OF THE DISCLOSURE**

***APPARATUS FOR CONTROLLING WAFER TEMPERATURE IN  
CHEMICAL MECHANICAL POLISHING***

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Apparatus controls the temperature of a wafer for chemical mechanical polishing operations. A wafer carrier wafer mounting surface positions a wafer adjacent to a thermal energy transfer unit for transferring energy relative to the wafer. A thermal energy detector oriented adjacent to the wafer mounting surface detects the temperature of the wafer. A  
10 controller is responsive to the detector for controlling the supply of thermal energy relative to the thermal energy transfer unit. Embodiments include defining separate areas of the wafer, providing separate sections of the thermal energy transfer unit for each separate area, and separately detecting the temperature of each separate area to separately control the supply of thermal energy relative to the thermal energy transfer unit associated with the  
15 separate area.